

16

3(1)

SOV/33-36-1-20/31

AUTHOR:

Drozdoz, S.V.

TITLE:

A Catalogue of Declinations of 197 Stars of the Poltava Zenith Program, Obtained From the Observations With the Zenith Telescope 1944-1947

PERIODICAL: *Astronomicheskii zhurnal*, 1959, Vol 36, Nr 1, pp 146-152 (USSR)

ABSTRACT:

The author gives the declination for 197 zenith stars of the Poltava-program with the error of  $\pm 0''.04$  (for pairs of stars  $\pm 0''.07$ ). The declination is determined according to the "method of the zenith point on the micrometer head". 7773 observations (1944.5 - 1947.5) with the zenith telescope in Poltava (objective diameter 135 mm, focal distance 1760 mm) are used. The present paper continues the catalogue published in [Ref 3,4]. The author mentions the observations of M.S.Zverev (Moscow), A.G. Oborneva, and A.S.Tsesyulevich (Odessa) which have been disturbed by the war. The values of latitude for Poltava obtained from the

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A Catalogue of Declinations of 197 Stars of the  
Poltava Zenith Program, Obtained From the  
Observations With the Zenith Telescope 1944-1947

SOV/33-36-1-20/31

7773 observations are already published in [Ref 1,2]. As polar  
coordinates the author used data of A.Ya.Orlov [Ref 5].  
There are 6 Soviet references.

ASSOCIATION: Poltavskaya gravimetricheskaya observatoriya Akademii nauk USSR,  
Novgorodskiy gosudarstvennyy pedagogicheskiy institut  
(Poltava Gravimetrical Observatory AS Ukr.SSR,  
Novgorod State Pedagogical Institute)

SUBMITTED: March 24, 1958

Card 2/2

DROZDOV, S.

Aurora borealis in Novgorod. Astron. tsir. no.201:23-24 Ap '59.  
(MIRA 13:2)

1. Pedinstitut, Novgorod.  
(Auroras)

8/035/60/000/006/009/038  
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 6,  
p. 19, # 5008

AUTHOR: Drozlov, S. V.

TITLE: Observations of the Partial <sup>V</sup>Lunar Eclipse of 1959, March 24

PERIODICAL: Astron. tsirkulyar, 1959, sent. 15, No. 204, pp. 9-10

TEXT: Observations were made with a 80-mm and a 72-mm (40x) refractor.  
The instants of contact of the Earth's umbra with the lunar formations were  
determined. The result is given and the eclipse is described.

Translator's note: This is the full translation of the original Russian  
abstract.

Card 1/1

DROZDOV, S. V.

PHASE I BOOK EXPLOITATION

SOV/5721

Vsesoyuznaya astrimetriceskaya konferentsiya.

Trudy 14-y Astrimetriceskoy konferentsii SSSR, Kiyev, 27-30 maya 1958 g.  
(Transactions of the 14th Astrimetric Conference of the USSR, Held in Kiyev  
27-30 May 1958) Moscow, Izd-vo AN SSSR, 1960. 440 p. Errata slip inserted.  
1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Glavnaya astronimicheskaya observatoriya  
(Pulkovo).

Resp. Ed.: M. S. Zverov, Corresponding Member, Academy of Sciences USSR; Ed. of  
Publishing House: N. K. Zaychik; Tech. Ed.: R. A. Zamarayeva.

PURPOSE: The book is intended for astronomers and astrophysicists, particularly  
those interested in astrimetric research.

COVERAGE: This publication presents the Transactions of the 14th Astrimetric  
Conference of the USSR, held in Kiyev 27-30 May 1958. It includes 27 reports  
and 55 scientific papers presented at the plenary meeting of the Conference

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Transactions of the 14th Astrometrical (Cont.)

80V/5721

60

and at the special sectional meetings. An appendix contains the resolutions adopted by the Conference, the composition of the committees, the agenda, and the list of participants at the Conference. A brief summary in English is given at the end of each article. References follow individual articles. The Presidium of the Astrometrical Committee (Chairman M. S. Zverev), which supervised the preparation of this publication, expresses thanks to the members of the secretariat: V. M. Vasil'yev, I. G. Kol'chinskiy, A. B. Onegina, and Kh. I. Potter.

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Transactions of the 14th Astrometrical (Cont.)

SOV/5721

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Card 15/16

L 19344-63 EWT(1)/FCC(w)/BDS/ES(v) AFTTC/ESD-3 Pe-4 GW  
ACCESSION NR: AR3002030 3/0269/63/000/005/0002/0002

SOURCE: RZh. Astronomiya. Otdel'nyy vypusk. Abs. 5.51.14

63

AUTHOR: Yakhontova, N. S.; Drozdov, S. V.

TITLE: Ivan Ivanovich Putilin

CITED SOURCE: Publikatsii Kievevskoy astronomicheskoy observatorii, no. 9, 1961, 78-81

TOPIC TAGS: minor planet, Putilin

TRANSLATION: A brief outline of the life and work of I. I. Putilin (1893-1954). The authors supply basic biographical information (from 1927 the subject was a scientist at the Astronomical-Geodetic Institute of the Moscow State University; during 1934-1946, senior scientific worker at Kiev University Observatory; from 1934 until his death, Docent at Kiev University). An evaluation of the value of Putilin's work in celestial mechanics is made; he contributed mainly to the study of a number of minor planets. Putilin was the author of a monograph, Minor Planets, the only one of its kind in the world literature. Putilin's work as

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L 19344-63

ACCESSION NR: AR3002030

organizer and first chairman of the Kiyev Division of the All-Union Astronomical and Geodetic Society is described. A portrait of the scientist is included.  
S. Selesnikov

DATE ACQ: 30May63

SUB CODE: AI

ENCL: 00

Card 2/2

DROZDOV, S.V. (Novgorod)

Precise recordings of contacts of the earth's shadow with  
lunar features. Bul. VAGO no.29:26-29 '61. (MIRA 14:7)

1. Novgorodskiy pedagogicheskiy institut.  
(Eclipses, Lunar)

DROZDOV, S.V., doktor fiz.-mat.nauk

White rainbow. Priroda 50 no. 2:69 F '61.

(MIRA 14:2)

1. Novgorodskiy gosudarstvennyy pedagogicheskiy institut.  
(Rainbow)

S/035/61/000/012/028/043  
A001/A101

AUTHOR: Drozdov, S.V.

TITLE: On precision of recording the contacts of Earth's umbra with lunar formations

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 12, 1961, 74, abstract 12A609 ("Byul. Vses. astron.-geod. o-va", no. 29, 26-29)

TEXT: The author draws attention to the fact that error  $\tau = \pm 0^m.2$ , which is usually cited for recording the instants of transit of the Earth's umbra border across formations of the lunar surface, corresponds only to frontal submer-sion of the objects into umbra, i.e., to the case when the motion of the object relative to the umbra coincides with the radius of the latter. If, however, the motion direction forms with the radius an angle  $\gamma$  the error will be  $\tau \sec \gamma$ . The methods of determining the  $\gamma$  angle analytically and graphically are presented. The author points out an excessive precision in the instants of eclipsing by the umbra border, given in some publications, and recommends to abstain from excessive precision in publishing such data.

I. Lebedeva

[Abstracter's note: Complete translation]

Card 1/1

DROZDOV, S. V.

Inspection of structures in geological surveys conducted for  
engineering purposes. Izv. vys. ucheb. zav.; geol. i razv. 5  
no.10:95-100 0 '62. (MIRA 16:1)

1. Moskovskiy geologorazvedochnyy institut imeni S.  
Ordzhonikidze.

(Engineering geology)

DROZDOV, S.V.

"Time and calendar" by A.V. Butkevich, V.N. Gan'shin, L.S.  
Khrenov. Reviewed by S.V. Drozdov. Biul. VAGO no.33:56-58  
'63. (MIRA 16:4)

1. Novgorodskiy pedagogicheskiy institut.  
(Calendar) (Butkevich, A.V.) (Gan'shin, V.N.)  
(Khrenov, L.S.)

L 11190-63

EWI(1)/FCC(w)/BDS/ES(v)--AFFTC/ESD-3--Pe-4/Po-4/

Pq-4--GW

ACCESSION NR: AP3001247

S/0033/63/040/003/0561/0570

70  
67

AUTHOR: Drozdoz, S.V.

TITLE: Substantiation of a method for the determination of latitude variations from observations of zenith-program stars

SOURCE: Astronomicheskii zhurnal, v. 40, no. 3, 1963, 561-570

TOPIC TAGS: latitude variation, zenith stars, zenith pairs, Talcott pairs, geodesy, astronomical point

ABSTRACT: It is shown that latitude variations can be obtained from the observation of zenith stars or zenith pairs (Talcott pairs), i.e., from the variations of the zenith distances obtained from observations of zenith stars or pairs. The method is explained step-by-step, and the results of the reduction of 1143 observations of faint zenith stars are adduced as a numerical example. It is noted that extensive series of observations of zenith stars or zenith pairs, elaborated by the method indicated here, requires a knowledge of the proper motions of the stars of a zenith program, in order that their effect on the results obtained be eliminated; otherwise the system of proper motions of the stars of a program will exert a progressively growing effect on the results. The

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ACCESSION NR: AP3001247

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examination of this problem will constitute the subject of a separate paper and will be submitted by the author at a future time. "In conclusion the author takes this opportunity to express his great gratitude to G.K.Tsimmerman" (Main Astronomical Observatory, Pulkovo) "for his attentive review of this study and his numerous valuable remarks." There are 12 numbered equations and 6 tables.

ASSOCIATION: Novgorodskiy gosudarstvennyy pedagogicheskiy institut (Novgorod State Pedagogical Institute)

SUBMITTED: 19Mar62

DATE ACQD: 01Jul63

ENCL: 00

SUB CODE: AS, PH

NO REF SOV: 006

OTHER: 000

ls/wm  
Card 2/2



DRUZDOV, S.V.

Reviews. Biul. VAGO no.35:53-59 '64.

(MIRA 18:4)

L 36935-66 EWT(m)/EWP(t)/ETI IJP(c) JD	
ACC NR: AP6023416	SOURCE CODE: UR/0139/66/000/003/0080/0082
AUTHOR: Drozdov, V. A.; Kurmashev, Sh. D.; Rvachev, A. L.	
ORG: <u>Odessa Polytechnic Institute</u> (Odesskiy politekhnicheskiy institut)	
TITLE: On the short-wave sensitivity of photovoltaic elements on the basis of cadmium sulfide	
SOURCE: IVUZ. Fizika, no. 3, 1966, 80-82	
<p>TOPIC TAGS: cadmium sulfide, photoelectric cell, photoelectric effect, oxygen , photovoltaic effect, vacuum chamber, high vacuum, radio wave</p> <p>ABSTRACT: If a high vacuum is maintained during the preparation of a CdS—Cu photovoltaic element, the back-irradiated cell will exhibit a marked sensitivity in the 400—500 <math>\mu</math>m range, with a supplementary maximum at 420 <math>\mu</math>m. This short-wave sensitivity will disappear and will be replaced by a shift toward the infrared region if the cell is allowed to stay in contact with atmospheric vapors and gases. The above observations were made with the use of a photovoltaic element obtained by the thermal evaporation of cadmium sulphide onto a copper-clad glass substrate and covered with a semitransparent aluminum film. The whole process was performed in a vacuum chamber at <math>10^{-5}</math> mm Hg. At frontal illumination of the vacuum-prepared cell, through a semitransparent copper film, the element showed a similar sensitivity to 400—500 <math>\mu</math>m wavelengths. The authors attribute the phenomenon to 1) the damping of short-wave CdS sensitivity caused by water vapor, which increases the rate of surface recombination of carriers, and 2) an increase of long-wave sensitivity caused by the pene-</p>	
Card 1/2	

L 36935-66

ACC NR: AP6023416

tration of oxygen into the CdS lattice. Since the glass substrate and the copper film protect the semiconductor from atmospheric elements better than the aluminum film, no shift of sensitivity was observed when the frontally illuminated vacuum-produced cell was kept in contact with air. Orig. art. has: 3 figures. [ZL]

SUB CODE: 20/ SUBM DATE: 06Aug64/ ORIG REF: 001/ OTH REF: 011/ ATD PRESS: 5038

Cord 2/2 000-

"APPROVED FOR RELEASE: Thursday, July 27, 2000

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APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00041123

DROZDOV, V.A., Cand Chem Sci--(disc) <sup>Use</sup> ~~Application~~ of organic reagents  
in the analysis of certain inorganic and silico-organic compounds."  
Mos, 1958. 12 pp (Min of Higher Education USSR. Hon Order of Lenin  
Chem-Technological Inst im D.I. Mendeleev), 100 copies (EL,25-58,108)

*DROZDOV, V. A.*

SOV/156-58-2-27/48

AUTHORS: Kreshkov, A. P., Vil'borg, S. S., Drozdov, V. A.

TITLE: ~~ferrocyanides~~  
Detection of Ferricyanogens in the Presence of Some Oxidizers  
(Otkrytiye ferritsianidov v prisutstvi nekotorykh okisliteley)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya  
tekhnologiya, 1958, Nr 2, pp. 314-316 (USSR)

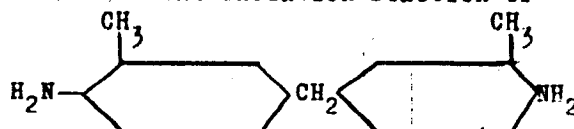
ABSTRACT: At present, such reactions as the formation of Turnbull's blue (Ref 1), silver-, copper- and other salts of low solubility (Ref 2), the oxidation reaction of benzidine (Ref 3) and others are applied for the detection of ferricyanogens. Since all these reactions show various deficiencies, the reaction proposed by Lapin (Ref 4) is of interest. Also in the work carried out by the authors it led to a positive result. New sensitive reactions for ferricyanogens which are based on the oxidation of amines and amine-mixtures by ferricyanogens, are described in the present paper. Dyes originate from this. The hydrochloride of dimethyl-paraphenylene-diamine ought to be taken as first component with amine-mixtures. Aniline-, dimethylaniline-, diethylaniline-, o- and p-toluidine, m- and p-nitroaniline-, sulfanilic- and naphthionic acid, as well as  $\alpha$ -naphthylamine

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SOV/156-58-2-27/48

Detection of Ferricyanogens in the Presence of Some Oxidizers

ought to be taken as second components. 4 derivatives of 4,4'-diamino-3,3'-dimethyl-diphenylmethane are used for the oxidation of individual substances, viz. as 5% solutions in glacial acetic acid. The test results are given in tables 1 and 2. As may be seen from table 1, the reaction of the synthesis of the dyes is of low sensitivity when using ferricyanogens. It follows from the data given in table 2 that the oxidation-reaction of the following compound:



has the maximum sensitivity of the 4,7- $\mu$ -ferricyanogen-ions. Neither nitrates, chlorates, bromates, iodates, perchlorates, arsenates nor periodates prevent the carrying out of the reaction. On the other hand, nitrites, persulfates, and chromates exercise a disturbing effect. There are 2 tables and 5 references, which are Soviet.

ASSOCIATION: Kafedra analiticheskoy khimii Moskovskogo khimiko-  
 tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair of  
 Card 2/3 Analytical Chemistry of the Moscow Chemical-Technological

SOV/156-58-2-21/48

Detection of Ferricyanogens in the Presence of Some Oxidizers

Institute imeni D. I. Mendeleev)

SUBMITTED: September 16, 1957

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AUTHORS: Vil'borg, S. S., Drozdov, V. A. SOV/156-58-4-27/49

TITLE: ~~Complexometric~~ Determination of the Iodates, Chromates and Ferricyanides (Kompleksonometricheskoye opredeleniye iodatov, khromatov i ferritsianidov)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 721-723 (USSR)

ABSTRACT: For the determination of the iodates, bromates and ferricyanides... some new variants of the complexometric titration were suggested. The determination of chromate was carried out by the following method: Chromate ion is precipitated by lead salt as lead chromate, and in this precipitate lead is determined by complexometric titration with acid chrome dark blue as indicator. This method makes it possible to determine chromate in the presence of other oxidizing agents and cations such as calcium and magnesium. In the determination of iodate, the iodate is also converted into lead iodate by precipitation with lead solution and the excess content of lead in the solution is titrated back by "Komplexon" (III) with acid chrome dark blue as indicator and with zinc sulfate solution. Ferricyanide is converted into ferrocyanide by a previous reduction with the

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SOV/156-58-4-27/49

Complexometric Determination of the Iodates, Chromates and Ferricyanides

aid of potassium iodide. Ferrocyanide is precipitated and the precipitate is dissolved with the exceeding "Komplexon" (III) solution. The exceeding "Komplexon" (III) is determined by titration with manganese sulfate and the indicator erio chrome black ET 00. The determination of ferrocyanide by the complexometric method was compared with the iodometric method and it was ascertained that the deviation of the complexometric method is not higher than 0.5%. There are 2 tables and 7 references, 1 of which is Soviet.

ASSOCIATION: Kafedra analiticheskoy khimii Moskovskogo khimiko-tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair of Analytical Chemistry at the Moscow Chemical and Technological Institute imeni D. I. Mendeleev)

SUBMITTED: April 17, 1958

Card 2/2

DROZDOV, V.

Spot analysis. IUn. tekhn. 3 no.8:47-48 Ag '59.

(MIRA 12:12)

(Chemistry, Analytic)

S/081/62/000/001/024/067  
B151/B101

AUTHORS: Kreshkov, A. E., Drozdov, V. A., Vlasova, Ye. G.,  
Kubiak, S.

TITLE: Determination of organosilicon compounds by titration  
in a non-aqueous medium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 158,  
abstract 1D158 (Vestn. tekhn. i ekon. inform. N.-1.  
in-t tekhn.-ekon. issled. Gos. kom-ta Sov. Min. SSSR  
po khimii, no. 10, 1960, 29-32)

TEXT: Methods are described for the analysis of alkyl(aryl) chlorosilanes  
(ACS), alkyl(aryl) (alkoxy)aminosilanes (AAS) and silamines (SA), based on  
their titration in non-aqueous media. It is shown that titration of  
non-aqueous solutions of these compounds can be carried out using indicators,  
potentiometry, conductivity measurement and high frequency methods. ACS are  
titrated in a medium consisting of mixed solvents;  $\text{CH}_3\text{CN} - \text{C}_6\text{H}_6$  (1 : 1) with  
0.1 - 0.05 M acetonitrilic solutions of nitron (diphenylendaniolhydrotriazole) /

Card 1/2

Determination of organosilicon ...

S/081/62/000/001/024/067  
B151/B101

(I) and pyridine (II) or 0.1 - 0.05 M benzene solution of dimethylamino-antipyrine (III) in the presence of the usual indicators (crystal violet, dimethyl amino azo benzene, bromocresol purple etc.). The titer of solution I is determined using an accurately weighed sample, while that of solution II is determined using  $\text{HClO}_4$ . The best results are obtained by titrating with solution III. With potentiometric determination the ACS is titrated with solution III using glass and calomel electrodes. The error of the method is  $\pm 0.5\%$ . Conductometric determination gives the best results by titrating the ACS with 0.1 M benzene solution of III; error of the method  $\pm 0.5\%$ . The differential conductometric titration of a mixture of methylchlorosilanes (MCS) is based on a preliminary quantitative conversion of the MCS by the action of  $\text{NH}_4\text{SCN}$  into methylthiocyanate substituted products (MTS) and subsequent conductometric titration of the MTS with solution III in a medium consisting of acetonitrile and diethyl ether. [Abstracter's note: Complete translation.]

Card 2/2

VIL'BORG, S.S.; DROZDOV, V.A.

Photometric determination of iodates. Izv.vys.ucheb.zav.; khim.i  
khim tekhn. 3 no.1:75-77 '60. (MIRA 13:6)

1. Kafedra analiticheskoy khimii Moskovskogo khimiko-tekhnologicheskogo instituta imeni D.I. Mendeleeva.  
(Iodates--Analysis)

5.5400

AUTHORS: Kreshkov, A. P., Drozdov, V. A.,  
Vlasova, Ye. G.

69667  
S/153/60/003/01/021/058  
B011/B005

TITLE: Potentiometric Titration of Nitrogen-containing Organosilicon  
Compounds in Nonaqueous Media

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya  
tekhnologiya, 1960, Vol 3, Nr 1, pp 80-84 (USSR)

TEXT: The authors worked out a new method for the quantitative determination of the compounds mentioned in the title. It is based on titration with  $\text{HClO}_4$  solution in acetic acid in acetonitrile- and nitromethane medium as well as in mixtures of the two latter with benzene and dioxane. The method is simple, quick, and sufficiently accurate. It can be recommended for practical purposes. The authors' experiments showed that sticky products with high adsorbing capacity are formed by titration of nitrogen-containing organosilicon compounds (OSC) in the anhydrous  $\text{CH}_3\text{COOH}$  medium. Besides other undesired processes, various complications are brought about. In the method suggested by the authors, however, the interaction of the substance to be analyzed with the solvent is eliminated. The glass electrode gives constant data. Finally, not only the OSC themselves but also most of their reaction products are soluble in acetonitrile with the titration reagent.

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Potentiometric Titration of Nitrogen-containing  
Organosilicon Compounds in Nonaqueous Media

S/153/60/003/01/021/058  
B011/B005

This avoids any complication in working with the glass electrode. As an additional solvent, the authors successfully used benzene, dioxane, and  $\text{CCl}_4$ . Thus, the potential jumps become more distinct, and the color change of the indicator becomes more intensive. The following OSC were investigated: 1) Trimethyl-(phenyl-amino)-silane, 2) dimethyl-di-(phenyl-amino)-silane, 3) methyl-tri-(phenyl-amino)-silane, 4) hexamethyl-disil-amine, 5) hexamethyl-cyclo-trisil-triamine, 6) octamethyl-cyclo-tetrasil-tetraamine, 7) methyl-(phenyl-amino-methyl)-di-methoxysilane, 8) methyl-(phenyl-amino-methyl)-diethoxysilane, 9) methyl-(ethyl-phenyl-amino-methyl)-dimethoxysilane, 10) methyl-(diphenyl-amino-methyl)-diethoxysilane, and 11) di-[dimethyl-(phenyl-amino-methyl)]-siloxane. They belong to 2 types: a) with nitrogen which is directly bound to silicon atoms, and b) with nitrogen as a component of the organic radicals. The former were synthesized, those of type b) were supplied by the laboratoriya kremnesoderashchikh soyedineniy INEOS AN SSSR (Laboratory of Silicon-containing Compounds of the Institute of Elemental-organic Compounds AS USSR). Table 1 shows the structural formulas and boiling points of the compounds 1-11. The OSC were also titrated with addition of the following indicators: crystal violet, thymol blue, bromocresol purple, bromophenol blue, cresol red, methyl red, dimethyl orange,

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69667

Potentiometric Titration of Nitrogen-containing  
Organosilicon Compounds in Nonaqueous Media

S/153/60/003/01/021/058  
B011/B005

and dimethyl-aminoazobenzene. It was shown that the OSC in the solvents mentioned have stronger basic properties than ammonia in the same medium. There are 2 figures, 2 tables, and 10 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleyeva;  
Kafedra analiticheskoy khimii (Moscow Institute of Chemical  
Technology imeni D. I. Mendeleyev; Chair of Analytical Chemistry)

SUBMITTED: April 6, 1959

Card 3/3

55400

AUTHORS:

Kreshkov, A. P., Drozdov, V. A.,  
Vlasova, Ye. G.

69668

S/153/60/003/01/022/058  
B011/B005

TITLE:

Potentiometric Titration of Individual Alkylchlorosilanes With  
Organic Bases in Acetonitrile Medium

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya  
tekhnologiya, 1960, Vol 3, Nr 1, pp 85-87 (USSR)

TEXT: The authors stated in their paper that trimethylchlorosilane, dimethyl-  
dichlorosilane, methyltrichlorosilane, and silicon tetrachloride can be success-  
fully titrated by potentiometric and visual methods with pyridine, dimethyl-  
aminoantipyrine, and nitron (diphenyl-endanylo-dihydro-triazol) in an aceto-  
nitrile medium ( $\text{CH}_3\text{CN}$ ). The high dielectric constant of  $\text{CH}_3\text{CN}$  (38.3) makes it  
possible to attain constant potential values. In the titration of  $(\text{CH}_3)_2\text{SiCl}_2$   
with dimethylaminoantipyrine, the authors tried to attain the maximum potential  
jumps, and added  $\text{C}_6\text{H}_6$ ,  $\text{C}_6\text{H}_5\text{CH}_3$ ,  $\text{C}_6\text{H}_5\text{Cl}$  and  $\text{CCl}_4$  for this purpose. All these  
solvents have a much lower dielectric constant than  $\text{CH}_3\text{CN}$ . The authors studied  
the influence of these substances on the character of the titration curves.  
Figure 1 shows the cell used for the titration of alkylchlorosilanes. Figures  
2-4 show the curves of potentiometric titration of individual methylchloro-

Card 1/2

69668

Potentiometric Titration of Individual  
Alkylchlorosilanes With Organic Bases in  
Acetonitrile Medium

S/153/60/003/01/022/058  
B011/B005

silanes and of  $\text{SiCl}_4$ . The following indicators were used for the visual titration (Table 2) of dimethyldichlorosilane with dimethylaminoantipyrine in  $\text{CH}_3\text{CN}$  medium: crystal violet, dimethylaminoazobenzene, bromocresol purple, dimethyl orange, bromophenol blue, gallomarine light-blue, xlenol. Figures 2-4 show that the quantity of the reagent used for the titration of individual methylchlorosilanes and  $\text{SiCl}_4$  directly depends on the number of chlorine atoms contained in the respective alkylchlorosilane. The greatest titration jump is characteristic of trimethylchlorosilane, the smallest of  $\text{SiCl}_4$ . In both titration methods, the maximum error is  $\pm 0.3\%$ . There are 4 figures, 1 table, and 8 references, 6 of which are Soviet. 4

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleeva; Kafedra analiticheskoy khimii (Moscow Institute of Chemical Technology imeni D. I. Mendeleev; Chair of Analytical Chemistry)

SUBMITTED: February 25, 1959

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S/032/60/026/010/002/035  
B016/B054

AUTHORS: Kreshkov, A. P., Drozdov, V. A., and Vlasova, Ye. G.

TITLE: Analysis of Nitrogen- and Carboxyl-containing Organosilicon Compounds by Titration in Non-aqueous Media

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 10, pp. 1080-1084

TEXT: In contrast to the conventional methods of analyzing nitrogen- and carboxyl-containing organosilicon compounds (Refs. 1,2), the authors developed methods based on potentiometric or visual titration of both types of compounds with perchloric acid or tetraethyl ammonium hydroxide in a medium of solvent mixtures. Both anhydrous acetic acid and acetic anhydride and glycols proved to be unsuitable. The solvent mixtures used were acetonitrile benzene, acetone benzene, or methyl-ethyl ketone benzene in a ratio of 1 : 1. Fig. 1 shows the curves of potentiometric titration for nitrogen-containing compounds of the above-mentioned type in which the nitrogen atoms are directly bound to the silicon atoms. Fig. 2 shows the same kind of titration of the said compounds in which the nitrogen atoms

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Analysis of Nitrogen- and Carboxyl-  
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are not directly bound to the silicon atoms. The titration is made with 0.1 N solution of perchloric acid in anhydrous acetic acid by means of a tube potentiometer ЛП-5 (LP-5) with glass and calomel electrodes. The point of equivalence is graphically determined. The consumption of titrating reagent is proportional to the number of nitrogen atoms. In titration by use of indicators, the following substances were used: crystalline violet, bromocresol purple, bromphenol blue, cresol red, and dimethyl-amino azobenzene as 0.5% solutions in acetonitrile, further thymol blue, methyl red, and dimethyl orange as saturated solutions in acetonitrile; all these indicators are suitable for visual titration. Fig. 3 shows the points of color change of the indicators in the titration of nitrogen-containing compounds. Curve A holds for substances with nitrogen atoms directly bound to Si atoms, Curve B for cyclic nitrogen-containing compounds, Curve C for compounds in which the nitrogen atoms are not bound to the Si atoms. Table 1 gives the results of a quantitative determination of nitrogen-containing organosilicon compounds. The titration of carboxyl-containing organosilicon compounds is made with tetraethyl ammonium

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Analysis of Nitrogen- and Carboxyl-  
containing Organosilicon Compounds by  
Titration in Non-aqueous Media

S/032/60/026/010/002/035  
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hydroxide in a benzene - methanol mixture (according to Ref. 4) on the LP-5 apparatus mentioned. Fig. 4 shows the graphical determination of the point of equivalence. Table 2 lists the results of quantitative determinations of carboxyl-containing compounds and their mixtures with organic acids. There are 4 figures, 2 tables, and 4 Soviet references.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I.  
Mendeleyeva (Moscow Institute of Chemical Technology imeni  
D. I. Mendeleyev)

Card 3/3

S/020/60/131/06/32/071  
B011/B005

AUTHORS: Kreshkov, A. P., Drozdov, V. A.

TITLE: A Method of Differentiated Conductometric Titration of a Mixture of Methylchlorosilanes in Nonaqueous Solutions

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 131, No. 6, pp. 1345 - 1348

TEXT: The method mentioned in the title for a quantitative determination of alkylchlorosilanes is suggested by the authors. It is quick, accurate, and can be successfully used for analyzing individual alkylthiocyanate silanes and their multicomponent mixtures. Such methods have been missing hitherto. The known methods require a complicated apparatus, have been insufficiently worked out, and have therefore not been introduced in practice. The authors' method is based on a transformation of alkylchlorosilanes into alkylthiocyanate-substituted derivatives. Ammonium thiocyanate is used for this purpose. Subsequently, the alkylthiocyanate silanes are conductometrically titrated with a benzene solution of dimethylaminoantipyrine in acetonitrile-ether medium. The authors studied trimethylchlorosilane, dimethyldichlorosilane, and methyltrichlorosilane, as well as their binary and 3-component mixtures. Figs. 1 and 2 show the curves of the

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a Mixture of Methylchlorosilanes in Nonaqueous  
Solutions

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conductometric titration mentioned. An analysis of these curves shows that primarily the thiocyanate derivative formed from methylchlorosilane is titrated off, then follows dimethyldithiocyanate silane, and finally methyltrithiocyanate silane, the derivative of methyltrichlorosilane with the highest number of chlorine atoms in the molecule. Table 1 shows the results of quantitative analysis of binary mixtures of methylchlorosilanes. These data prove the accuracy of the method suggested. Table 2 lists results of the same analysis of 3-component mixtures carried out with equal success. There are 2 figures, 2 tables, and 9 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D.I. Mendeleeva  
(Moscow Institute of Chemical Technology imeni D. I. Mendeleev)

PRESENTED: December 25, 1959, by I. V. Tananayev, Academician

SUBMITTED: December 23, 1959

Card 2/2



KRESHKOV, A.P.; DROZDOV, V.A.; VLASOVA, Ye.G.; VLASOV, S.V.; BUSLAYEV, Yu.A.

Potentiometric titration in anhydrous media as a means of studying  
the properties of fluorides in some polyvalent metals. Atom.  
energ. 11 no.6:553-554 D '61. (MIRA 14:11)  
(Potentiometric analysis) (Fluorides)

15.9201

26892  
S/138/61/000/004/003/006  
A051/A129

AUTHORS: Rabinerzon, M.A., Kalas, A.Ye., Beresnev, V.N. Drozdov, V.A.

TITLE: Conditions for the coagulation of latexes containing Nekal  
and soap of carboxylic acids using sodium chloride with a  
serum recycle

PERIODICAL: Kauchuk i rezina, <sup>20</sup>no. 4, 1961, 16-22

TEXT: The Soviet chemical industry is presently manufacturing  
emulsion butadiene-styrene rubbers using Nekal (sodium salt of dibutyl-  
naphthalenesulfoacid) as the emulsifier and calcium chloride for the  
formation of rubber from latex. It has been shown that the presence of  
calcium ions in the rubber in the form of the salt of dibutyl-naphthalene-  
sulfoacid or in the form of mineral salts, have a negative effect on the  
properties of the vulcanizates and especially on the adhesion between the  
rubber and the cord and its double layer. Two methods are mentioned for  
improving the quality of butadiene-styrene rubber today. The first  
method involves the replacement of the calcium chloride by sodium chloride  
for the coagulation of the latex. The second method is based on the  
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replacement of the Nekal emulsifier with soaps of modified colophony (dresinates) and fatty acids with coagulation of the latex using also sodium chloride. The latter substitution alleviates the purification of sewage waters. The results are given of the investigations into the coagulation of butadiene-styrene latexes obtained in the presence of Nekal CKC-30AP (SKS-30AR) and CKC 30APM (SKS-30ARM) or soaps of modified colophony and synthetic fatty acids CKC-30APK (SKS-30ARK) and CKC-30K (SKS-30K) with aqueous solutions of sodium chloride using recycle serum. The obtained data show that the two comparable latexes differ by their rubber content and the magnitude of the surface tension. It has been experimentally established that for a complete coagulation of the SKS-30AR and SKS-30RM latex forming a granular coagulum in the shape of a ribbon a minimum concentration of the sodium chloride in the coagulating solution within the range of 11-12% is required. Analyzing the balance of the serum during the coagulation process, the following equation of salt consumption in the coagulation of the latexes is derived:  $Q = C_2(q + F)$  (1), where Q is the salt consumption, kg/t of rubber,  $C_2$  - concentration of the serum in weight parts, q - the consumption of serum, kg/t, F - quantity of serum carried off with the rubber, kg/t. The removal of the serum is

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determined from the equation:

$$q = \frac{C_0(G_2 - G_1)}{C_0 - C_2} - F \quad (2) \quad \text{where } C_0 \text{ is the concentration of the}$$

strengthening solution in weight parts (in the case of the use of a solid salt,  $C_0 = 1$ ),  $G_2$  - quantity of the reciprocal serum, kg/t,  $G_1$  - the quantity of the coagulated solution, kg/t. Solving (1) and (2), then the general equation for the determination of the salt consumption for latex coagulation with recycle serum is

$$q = \frac{C_0 \cdot C_2 (G_2 - G_1)}{C_0 - C_2} \quad (3).$$

First experiments on the coagulation of latexes obtained with soaps of modified colophony and synthetic fatty acids showed that even a small admixture of calcium chloride and to a lesser extent magnesium chloride in the sodium chloride causes a lumpy coagulum. When the granular coagulum is formed two factors are significant: the distribution of the salt and acid and the rate of adsorption of the soap by the particles of Card 3/6

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A051/A129

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the rubber in the flocculate which is associated with the rate of the salting-out and affects the redistribution of the soap between the newly formed particles. It was proven that the amount of the serum carried away with the rubber varies within the limits of 76-80% of the total weight of the ribbon, i.e., equals about 4 times the quantity of the rubber. With a decrease in the concentration of the latex, the concentration of the salt in the serum increases and thus its consumption also increases. The obtained experimental material is summarized in the following equations:

$$Q = \frac{10C_2 \cdot C_1 (10^2 - C_3)}{(C_1 - C_2) C_1} \quad (4), \text{ where } Q \text{ is the salt}$$

consumption, kg/t of rubber,  $C_2$  - serum concentration, %,  $C_1$  - concentration of rubber in the latex %. The equation shows that the salt consumption as in the case of the coagulation of the latex containing Nekal depends on the concentration of the serum and the latex. The optimum concentration of the latex ensuring the necessary quantity of the serum is expressed through the relationships:

$$C_{\text{latex}} = \frac{10^2(100-F)}{10^2 - F \cdot C_1} \quad (5), \text{ where } C_{\text{latex}} \text{ is the}$$

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A091/A129

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optimum concentration of the latex, %, F- quantity of the serum carried off with the rubber, kg/t,  $C_1'$ -salt concentration in the coagulated solution, %,  $C_2'$  - salt concentration in the serum, %. The following salt consumptions were established for industrial types of synthetic rubbers, applicable to the ribbon-forming machines: a) for the SKS-3OARK or SKS-3OARKM at a phase ratio of 1:2 in the polymerization formulation 200-250 kg/t; at a phase ratio of 1:2.5 up to 350 kg/t of rubber; b) for SKS-3OK at a phase ratio of 1:1.5 up to 150 kg/t of rubber, at a phase ratio of 1:1.8 200 kg/t; c) for SKS-3OAR or SKS-3OARM at a strengthening of the serum with a solid salt 500-600 kg/t, in the case of strengthening the serum with a solution of salt up to 100 kg/t. It is concluded that conditions for coagulation of latex with sodium chloride and serum recycle have been developed which reduce considerably the salt consumption. Methods have been found for lowering the salt consumption for coagulation by obtaining more concentrated latexes. The described results were applied at the Voronezh Synthetic Rubber Plant. There are 4 graphs, 3 tables and 2 Soviet-bloc references.

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Conditions for the ...

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S/138/61/000/004/003/006  
A051/A129

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteti-  
cheskogo kauchuka im.S.V. Lebedev i Voronezhskiy zavod  
SK (All-Union Scientific Research Institute of Synthetic  
Rubber im. S.V. Lebedev and the Voronezh Synthetic Rubber  
Plant).

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15 8312

27510  
S/079/61/031/009/011/012  
D215/D306

AUTHORS: Kreshkov, A.P., Drozдов, V.A., and Kubiak, S.  
TITLE: Properties of alkylchlorosilanes in acetonitrile medium  
PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 9, 1961,  
3099 - 3103

TEXT: The present work deals with the conductometric examinations of methylchlorosilanes. The conductometric titration was carried out in a series of organic solvents and the measurements were taken of specific and equivalent conductivities of methylchlorosilanes in acetonitrile medium. The choice of acetonitrile was made due to its excellent properties as a solvent for inorganic, organic and organosilicon compounds, ability to increase the dissociation of salts, acids and bases and also its low association in liquid state as compared with that of methanol or ethanol. According to R.S. Mulliken (Ref. 4: J. Phys. Chem. 56, 814, 1952) donoracceptor classification acetonitrile may function in two ways, as base con-

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taining easily ionizable pair of electrons and as  $\pi$ -ketoidal acceptor. The compounds used in the investigations were pure trimethylchlorosilane, dimethyldichlorosilane and methyltrichlorosilane, titrants were organic bases containing tertiary nitrogen atoms (pyridine, quinoline, 8-hydroxyquinoline, dimethylaminoantipyrine etc.). Conductometric titration was conducted with the aid of Kohlrausch bridge and a closed-type cell with sealed platinum plated platinum electrode. Measurements of electroconductivity of methylchlorosilanes in acetonitrile medium was carried out in thermostatically controlled 50 cc spherical vessel. The choice of medium for conducting the measurements was carried out experimentally using methylchlorosilane in various organic solvents such as acetonitrile, benzonitrile, nitromethane, nitrobenzene, cyclohexanone, methyl ethyl ketone and methyl butyl ketone, and an organic base as a titrant. Typical conductometric titration curves are given in Fig. 1, and it is shown that the best medium is provided by acetonitrile. The titration curves for various methylchlorosilanes are given in Fig. 2. They are shown to exhibit two characteri-

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stic points: one (minimum) which corresponds to about half-way titration, and the other (beginning of horizontal portion) exact end point also given by bromocresol purple indicator (colorless to bright yellow). On reacting with organic bases, methylchlorosilanes behave as acids and the chemical processes may be represented as follows:  $2R_nSiCl_{4-n} + \text{amine} \rightleftharpoons (2R_nSiCl_{4-n}) \text{ amine}$  for the half-way point and for the end point:  $(2R_nSiCl_{4-n}) \text{ amine} + \text{amine} \rightleftharpoons 2 [(R_nSiCl_{4-n}) \cdot \text{amine}]$ . The formation of this complex is accompanied by the increased conductivity of the solution due probably to its dissociation. On the other hand the half-way titration complex is more stable and causes the increase in the resistance of the solution accompanied by the reduction in conductivity. To establish the possible electrolytic dissociation of pure methylchlorosilanes the authors have measured conductivity of the latter in acetonitrile medium at constant temperature (26°C). The variations of specific and equivalent conductivities of methylchlorosilanes on dilution with acetonitrile solutions is represented in Fig. 4. As

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the dilution increases  $\lambda$  increases as a result of higher degree of dissociation ( $\alpha$ ). The relationship of  $\lambda$  to dilution shows that methylchlorosilanes behave as weak electrolytes in non aqueous media and conform to Ostwald's law. The process of formation of current-conducting acetonitrile solutions of alkylchlorosilanes may be illustrated on the example of trimethylchlorosilane. Knowing the ionic mobility of the dissociation products it is possible to calculate dissociation constants for every methylchlorosilane. The degree of dissociation is highest for trimethylchlorosilane and lowest for methyltrichlorosilane. There are 4 figures and 6 references: 2 Soviet-bloc and 4 non-Soviet-bloc. The 3 references to the English-language publications read as follows: E.A. Abrahamson, C.A. Reynolds, Anal. Ch., 24, 1827, 1952; R.S. Mulliken, J. Phys. Chem., 56, 814, 1952; E.A. Jerger, G.M. Barrow, J. Am.Chem. Soc., 77, 4474, 6-06, 1955.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D.I. Mendeleeva (Moscow Institute of Chemistry and Technology im. D.I. Mendeleev)

SUBMITTED: September 30, 1960

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S/191/63/000/004/012/015  
B101/B186

AUTHORS: Kreshkov, A. P., Drozdov, V. A., Tarasyants, R. R.

TITLE: Analysis of alkyl silane phosphoric acids by titration in nonaqueous media

PERIODICAL: Plasticheskiye massy, no. 4, 1963, 57 - 60

TEXT: A titration method was developed to allow of rapidly determining the acid content of synthesis residues and the phosphorus or  $\text{OPO}(\text{OH})_2$  content in phosphorus-containing organosilicon compounds. For this purpose, the authors studied the titration of alkylsilane phosphoric acids synthesized in absolute ether by the following equation:  $(4-n)\text{XH}_2\text{PO}_4 + \text{R}_n\text{SiCl}_{4-n} \rightarrow (4-n)\text{HCl} + \text{R}_n\text{Si}[\text{OPO}(\text{OH})_2]_{4-n}$ ;  $\text{M} = \text{K}$  or  $\text{Na}$ ,  $\text{R} = \text{CH}_3$ ,  $\text{C}_2\text{H}_5$ ,  $\text{ClCH}_2(\text{CH}_3)_2$ , or  $\text{CH}_3(\text{CH}_2=\text{CH})$ . The synthesized compounds are highly viscous liquids which cannot be purified either by crystallization or by vacuum distillation. They are analyzed by potentiometric titration. The curve mg titrant versus mv potential was plotted, and the point of equivalence was determined graphically. The following results for trimethyl silane phosphoric acid  
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S/191/63/000/004/012/015  
B101/B186

Analysis of alkyl silane...

are given by way of example: (1) Titration of lithium ethylate in methanol passes two stages according to the reaction  $(\text{CH}_3)_3\text{SiOPO}(\text{OH})_2 + \text{CH}_3\text{OLi} \rightarrow (\text{CH}_3)_3\text{SiOPO}(\text{OH})\text{OLi} + \text{CH}_3\text{OH}$ ;  $(\text{CH}_3)_3\text{SiOPO}(\text{OH})\text{OLi} + 2\text{CH}_3\text{OLi} \rightarrow (\text{CH}_3)_3\text{SiOCH}_3 + \text{Li}_3\text{PO}_4 + \text{CH}_3\text{OH}$ . In ethyl, isopropyl, and n-butyl alcohols as well as in acetonitrile, acetone, methyl-ethyl ketone and methyl butyl ketone, the reaction takes place in a single stage forming immediately trimethyl methoxy silane and trilithium phosphate with the consumption of 3 moles titrant per mole of acid. The potential jump is 300 - 350 mv. (2). Titration of trimethyl silane phosphoric acid with potassium methylate or tetramethyl ammonium hydroxide in all media follows the reaction  $(\text{CH}_3)_3\text{SiOPO}(\text{OH})_2 + \text{CH}_3\text{OK} \rightarrow (\text{CH}_3)_3\text{SiOCH}_3 + \text{KH}_2\text{PO}_4$ . (3) Titration with sodium methylate in isopropyl-n-butyl or benzyl alcohols is the same as titration with potassium methylate. In methanol or ethanol, however, two potential jumps are observed corresponding to the successive consumption of two equivalents of the titrant. The first jump corresponds to the formation of sodium trimethyl silane hydrophosphate. In acetonitrile and in ketones, 1 mole of titrant per mole of acid is consumed for titration with sodium methylate. The

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Analysis of alkyl silane...

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potential jumps are between 300 and 350 mv. (4) The study on use of quinizarine, bromine-phenol blue, brilliant yellow, alkali blue, and methyl red as indicators during titration showed that the color reversion of methyl red corresponded most precisely to the points of equivalence determined potentiometrically. There are 5 figures and 1 table.

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L 12581-63

RM/WW/MAY

EPR/EWP(j)/EPF(c)/EWT(m)/BDS ASD. Ps-4/Pc-4/Pr-4

ACCESSION NR: AP3003314

S/0191/63/000/007/0058/0061

AUTHORS: Kreshkov, A. P.; Drozdev, V. A.; Tarasants, R. R. 70

TITLE: Nonaqueous titration of monomeric and polymeric organic borosilicate compounds 71

SOURCE: Plasticheskiye massy, no. 7, 1963, 58-61

TOPIC TAGS: boron, silicon, alkylsilane, arylchlorosilane, acetone, acetonitrile, methylethylketone, diethylketone, methylbutylketone, nitromethane, potassium methoxide

ABSTRACT: A new method of analysis of organic borosilicate compounds based on a nonaqueous potentiometric or visual titrimetric method has been developed. This is a rapid and accurate method, and the same sample can be used for determination of borosilicate compounds as well as for alkyl and arylchlorosilanes which are the starting products. The solvents investigated as titration media were acetone, acetonitrile, methylethylketone, diethylketone, methylbutylketone, nitromethane and several alcohols. The titrant used was potassium methoxide. The best-suited solvents were found to be methyl alcohol, methylethylketone, nitromethane and acetone. An interesting fact was found that, by addition of

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L 12581-63  
ACCESSION NR: AP3003314

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small amounts of glycerin, it was possible to control the magnitude of the potential drop between the breaks. Quinizarin and 1.5-doxianthraquinone were used as indicators for visual titration. The visual titrations are more applicable for individual compounds and not in mixtures. Orig. art. has: 3 tables and 4 figures,

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 30Jul63

ENCL: 00

SUB CODE: ML

NO REF SOV: 006

OTHER: 004

Card 2/2



DROZDOVA, V.A.; VLASOVA, Ye.G.

Determination of acetoxy groups in various substituted acetoxysilanes  
using the method of titration in nonaqueous media. Trudy Kon.anal.khim.  
13:187-191 '63. (MIRA 16:5)

1. Moskovskiy khimiko-tekhnologicheskoy institut imeni  
D.I.Mendeleyeva, kafedra analiticheskoy khimii.  
(Silane) (Acetoxy group)

SECRET EWT(m)/EPT(c)/EPR/EMP(j) Po-L/Pt-L Ps-L HPT ~~SP~~ RM

"APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00041123

L 52558-65

APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R000411230

DROZDOV, V.A.; TARASYANTS, R.R.; VLASOVA, Ye.G.; KUBYAK, Z.A.

Study of trialkylsilylphosphoric acids and bis-(trialkylsilyl) sulfates by conductometric titration in nonaqueous media. Izv. vys.ucheb.zav.; khim. i khim. tekh. 6 no.6:960-964 '63. (MIRA 17:4)

1. Moskovskiy khimiko-tekhnologicheskoy institut imeni Medeleyleva, kafedra analiticheskoy khimii.

KRESHKOV, A.P.; DROZDOV, V.A.; KOISHINA, N.A.

Determination of methylphosphinic acid and its derivatives by titration  
in nonaqueous media. Zhur.anal.khim. 19 no.10:1177-1182 '64.  
(MIRA 17:12)

1. D.I.Mendeleev Moscow Chemico-Technological Institute.

ACCESSION NR: AP4033609

8/0032/64/030/004/0413/0415

AUTHORS: Kreshkov, A. P.; Drosdov, V. A.; Tarasyants, R. A.

TITLE: Titration of alkylthiocyanatesilanes in nonaqueous media

SOURCE: Zavodskaya laboratoriya, v. 30, no. 4, 1964, 413-415

TOPIC TAGS: alkylthiocyanatesilane, alkylthiocyanatesilane titration, sodium methylate titration, LP 58 potentiometer

ABSTRACT: A method was developed for the quantitative determination of the SCN groups in alkylthiocyanatesilanes of the general formula  $R_nSi(SCN)_{4-n}$ , where the R is a methyl, ethyl, or ethylene group. The method was based on titration with a methanol solution of sodium methylate in a medium of acetonitrile, or methyl, ethyl, n-propyl, and n-butyl alcohol. In one modification the titration was conducted in the presence of indicators of the oxyanthraquinone series (such as quinizarin, purpurin, alizarin, and anthracene) used in the form of saturated solutions in acetonitrile. In the second modification the titration was conducted by means of a LP-58 potentiometer with a system of glass and calomel electrodes. The neutralization point corresponded to a sharp jump (about 400 mv) of the

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ACCESSION NR: APL033609

potential. The procedure consisted of placing a 0.03-0.09 gm sample into a 50 ml beaker, adding 15 ml of absolute alcohol or of anhydrous acetonitrile, and dissolving the sample. Titration was started 1-2 minutes after the immersion of the electrodes. The potential of the system was established after the addition of 0.04-0.06 ml of a 0.1 normal solution of  $\text{CH}_3\text{ONa}$ . In the region of the potential jump the solution was added drop by drop. The equivalence point is located by means of a graph. The potentiometric method permits a separate determination of various alkylthiocyanatesilanes in a mixture. Orig. art. has: 2 tables and 2 charts.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleeva  
(Moscow Chemico-technological Institute)

SUBMITTED: 00

DATE ACQ: 28Apr64

ENCL: 00

SUB CODE: CH

NO REF SOV: 005

OTHER: 001

Card 2/2

KRESHKOV, A.P.; SAYUSHKINA, Ye.N.; DROZDOV, V.A.

Preparation of tetramethyl ammonium hydroxide solution by  
the ion-exchange method. Zhur. prikl. khim. 37 no.9:1894-  
1898 S '64. (MIRA 17:10)

1. Moskovskiy khimiko-tekhnologicheskii institut imeni  
Mendeleeva.



ACCESSION NR: AP4033407

8/0076/64/038/003/0738/0740

AUTHOR: Kreshkov, A. P.; Vlasov, S. V.; Drozdov, V. A.; Vlasova, Ye. G.

TITLE: Study of certain properties of oxygen containing silicon organic compounds in liquid hydrogen fluoride medium.

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 3, 1964, 738-740

TOPIC TAGS: silicon organic compound, hydrogen fluoride, sodium triethyl silanolate, triethyl silinole, hexamethyldisiloxane, hexaethylidisilocane, electrical conductivity method, dissociation

ABSTRACT: Oxygen containing silicon organic compounds, such as sodium triethylsilanolate  $(C_2H_5)_3SiONa$  (I), triethylsilanole  $(C_2H_5)_3SiOH$  (II), hexamethyldisiloxane  $[(CH_3)_3Si]_2$  (III) and hexaethylidisilocane  $[(C_2H_5)_3Si]_2O$  (IV) in a liquid hydrogen fluoride medium were studied by the electrical conductivity method. The specific and equivalent electrical conductance were calculated for the studied compounds. Liquid hydrogen fluoride was chosen as a solvent because of its high dielectric constant, low viscosity, low molecular association and the fact that most compounds, when dissolved in hydrogen fluoride, act as bases. The dissolving

Cord 1/3

ACCESSION NR: AP4033407

process of organic compounds in hydrogen fluoride is assumed to proceed by the attachment of hydrogen fluoride to the dissolving compound accompanied by the dissociation of the solvate into a complex cation and hydrofluoride ion. All the compounds used in the experiment were thoroughly purified. Hydrogen fluoride was purified by a fractionation copper column and had a specific electrical conductivity of  $1.29 \cdot 10^{-4} - 9.43 \cdot 10^{-4} \text{ ohm}^{-1} \cdot \text{cm}^{-1}$ , which corresponded to 0.01 to 0.05 % water content. The electrical conductivity was measured at 1000 cycles at  $-10 - 0.1^\circ \text{C}$  and the results of these measurements are given in a table. It was found from the specific conductance that compound II behaved analogously to alcohols (ethanol) and displayed strong basicity. Compounds III and IV were analogous to ethers (diethyl ether) with weakly basic properties. It is concluded that the dissociation of the silicon organic compounds in liquid hydrogen fluoride is similar to the silicon organic compounds in liquid hydrogen fluoride is similar to the dissociation of organic compounds and can be expressed as follows:

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KRESHKOV, A.P.; DROZDOV, V.A.; KOICHINA, N.A.

Titration of some derivatives of methylphosphinic acids in a non-aqueous medium. Zav. lab. 31 no.21804-180 '88.

(MIRA 18:7)

L 1343-66 ENT(m)/EPF(c)/EWP(j)/T/EWA(c) RPL WW/RM

ACCESSION NR: AP5024362

UR/0286/65/000/015/0031/0031

661.718.1'5:547.412:26'241'245

AUTHOR: <sup>44,55</sup>Kreshkov, A. P.; <sup>44,55</sup>Drozdov, V. A.; <sup>44,55</sup>Orlova, I. Yu.

TITLE: A method for producing trialkyl difluorophosphate silanes, Class 12,  
No. 173228 <sup>7, 44, 55</sup>

38  
B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 31

TOPIC TAGS: silane, organosilicon compound, ammonium phosphate, fluorinated organic compound, chlorinated organic compound

ABSTRACT: This Author's Certificate introduces: 1. A method for producing trialkyl difluorophosphate silanes, e. g. trimethyl, triethyl, dimethylethyl and diethylpropyl difluorophosphate silanes. Trialkyl chlorosilanes are interacted with ammonium difluorophosphate in an organic solvent with the application of heat. A modification of this method in which the reaction mixture is heated to boiling.

ASSOCIATION: Moskovskiy khimiko-tehnologicheskii institut im. D. I. Mendeleeva (Moscow Institute of Chemical Technology) <sup>44,55</sup>

SUBMITTED: 13Apr63

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 000

OTHER: 000

Card 1/1



L 31271-66 EWT(1)/EWT(m)/EWP(j) RM/RO	
ACC NR: APEU22801	SOURCE CODE: UR/0079/66/036/002/0307/0310
AUTHOR: <u>Kreshkov, A. P.; Drozdov, V. A.; Orlova, I. Yu.</u>	
ORG: none	
TITLE: Synthesis and investigation of certain properties of <u>Bis[trialkyl(aryl)-silyl]monofluorophosphates</u>	
SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 307-310	
TOPIC TAGS: chemical synthesis, organic phosphorus compound, organosilicon compound, hydrolysis, reaction mechanism, condensation reaction, toxicity, cholinesterase, fluorinated organic compound	
ABSTRACT: Bis[trialkyl(aryl)silyl]monofluorophosphates with the general formula $(R_3SiO)_2POF$ were synthesized by reaction of trialkyl(aryl)chlorosilanes with the silver salt of monofluorophosphoric acid. Six new organosilicon monofluorophosphates were produced by the reaction of trimethyl-, triethyl-, dimethylethyl-, dimethylphenyl-, diphenylmethyl-, and dimethyl-p-fluorophenylfluorosilanes. Physical and chemical properties of the products were studied; the fluorophosphates obtained undergo hydrolysis, react with a methanol solution of an alkali metal methoxide at the Si-O bond, and undergo condensation at the Si-O-P and P-F bonds when heated above 200-250° at atmospheric pressure. The toxicity of bis[trialkyl(aryl)silyl]monofluorophosphates was found to be far lower than the toxicity of their organic analogs; the compounds exhibit practically no anticholinesterase activity.	
Orig. art. has: 2 figures and 1 table. [JPRS]	
SUB CODE: 07, 06 /	SUBM DATE: 02Oct64 / ORIG REF: 007 / OTH REF: 005
Card 1/1 92	UDC: 546.185 + 547.245: 542.951.3

L 21529-66 ENT(m)/ENP(1)/T WW/RM

ACC NR: AP6009157

SOURCE CODE: UR/0079/66/036/003/0525/0528

AUTHOR: Kreshkov, A. P.; Drozdov, V. A.; Orlova, I. Yu.

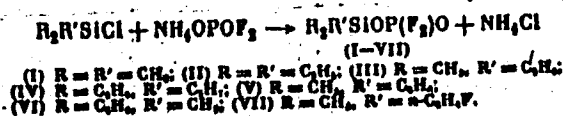
ORG: none

TITLE: Synthesis and investigation of some properties of trialkyl- and triarylsilyl difluorophosphates 23  
B

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 525-528

TOPIC TAGS: silane, organophosphorus compound, fluorophosphate ester, silyl ester

ABSTRACT: Ammonium difluorophosphate reacts with trialkyl- or triarylsilyl chlorides in absolute ether to form trialkyl- or triarylsilyl difluorophosphates:



The products are colorless, transparent liquids with a sharp odor, which tend to fume in air. They are easily soluble in polar and nonpolar solvents. It was shown that the products decompose partially on heating, probably in the following manner:



Cord 1/2

UDC: 547.558

L 21529-66

ACC NR: AP6009157

Triethylfluorosilane and phosphorus pentoxide were identified among the decomposition products. The bond strength of the ester function was checked by potentiometric titration in methanol. Orig. art. has: 2 figures and 1 table. [VS]

SUB CODE: 07 SUBM DATE: 17Feb65/ ORIG REF: 006/ OTH REF: 006/ ATD PRESS: 4218

Card <sup>ddp</sup> 2/2

L 39751-66 EWT(m)/EAP(j) RM/WW/GD-2  
ACC NR: AT 6015922

SOURCE CODE: UR/0286/65/000/015/0031/0031

INVENTOR: Kreshkov, A. P.; Drozdov, V. A.; Orlova, I. Yu.

ORG: Moscow Chemico-Technological Institute im. D. I. Mendeleev (Moskovskiy khimiko-  
tekhnologicheskii institut)

TITLE: Method for obtaining trialkyldifluorophosphatesilanes—Certificato No. 173228,  
Class C 07f

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 31

TOPIC TAGS: silane, organic phosphorus compound, phosphato, halogenated organic  
compound

ABSTRACT: The method for obtaining trialkyldifluoro phosphatesilanes, for  
example trimethyl-, triethyl-, dimethylethyl-, diethylpropyldifluoro- phos-  
phatesilanes, distinguished by the fact that trialkylchlorosilanes are sub-  
jected to reaction with ammonium difluorophosphate in an organic solvent with  
heating. The method according to paragraph 1. distinguished by the fact that  
the reaction mixture is heated to boiling. [JPRS]

SUB CODE: 06 / SUBM DATE: 13Apr63

L 38791-66 WPT(j)/WPT(1)/WPT(u) 13/80

ACC NR: AP6021968

SOURCE CODE: UR/0153/66/009/002/0200/0204

AUTHOR: Kreshkov, A. P.; Drozdov, V. A.; Kolchina, N. A.

37  
B

ORG: Moscow Chemical Technology Institute im. D. I. Mendeleev (Moskovskiy khimiko-tekhnologicheskii institut)

TITLE: Determination of alkyl phosphonic and phosphonothioic dichlorides,<sup>1</sup> dialkyl-phosphinic and phosphinothioic chlorides

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 2, 1966, 200-204

TOPIC TAGS: analytic chemistry, volumetric analysis, potentiometric titration, organic phosphorus compound, organic sulfur compound, organophosphorus compound

ABSTRACT: A titrimetric method has been developed for quantitative determination of alkyl-phosphonic and phosphonothioic dichlorides, dialkyl-phosphinic and phosphinothioic chlorides, of methylphosphonic acid and free hydrochloric acid in the above-listed chlorides. The method was based on the reactions of these chlorides or methylphosphonic acid with a measured excess of an amine (piperidine or cyclohexylamine) in an organic solvent. Back-titration, potentiometric or visual, of the excess amine with 0.1 N HCl determined the quantity of all the organophosphorus or S-containing organophosphorus chlorides studied and of methylphosphonic acid. The relative error of all determinations with piperidine did not exceed -2.4%. Direct potentio-

Card 1/2

UDC: 543.257

2 38751-66

ACC NR: AP6021968

metric titration of the free HCl impurity with triethylamine in a mixed organic solvent was successfully applied only to S-containing organophosphorus chlorides. [JK]  
Orig. art. has: 2 figures, 3 tables, and 2 formulas.

SUB CODE: 07/ SUBM DATE: 22Jun64/ ORIG REF: 003/ OTH REF: 011

Card 2/2 *10*

DROZDOV, V. A.

124-11-12888

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p. 86 (USSR)

AUTHORS: Listov, A. M. , and DrozdoV, V. A.

TITLE: A Differential Thermoelectroanemometer.  
(Differentsial'nyy termoelektroanemometr)

PERIODICAL: Soobshch. Vses. n.-i. in-ta'zh.-d. str-va i proyektir. , 1955, Nr 66,  
18 pp.

ABSTRACT: Bibliographic entry.

Card 1/1

L 7951-66

ACC NR: AP5025707

SOURCE CODE: UR/0286/65/000/018/0057/0057

AUTHORS: Ryachev, A. L.; Drosdov, V. A.

ORG: none

TITLE: Film photovoltaic cell. Class 21, No. 174731

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 57

TOPIC TAGS: photoelectric cell, semiconducting film, photoconducting film, uv detector

ABSTRACT: This Author Certificate presents a film photovoltaic cell. To produce a high integral sensitivity with the maximum in the ultraviolet region, the p-n junction is made on a base of a combination of cuprous oxide and cadmium sulfide films.

SUB CODE: EC/

SUBM DATE: 13Nov63

Card 1/1

UDC: 621.383.51



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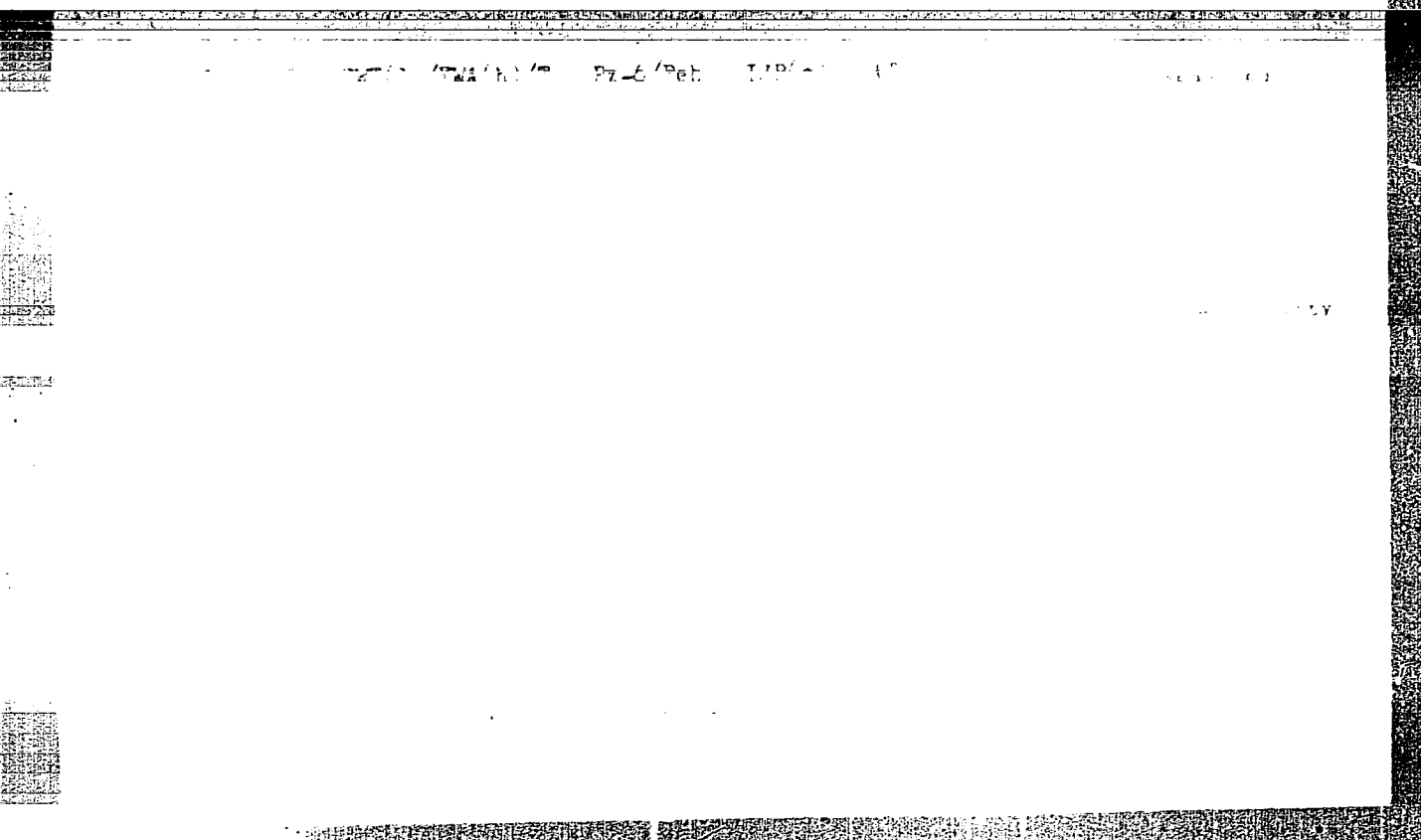
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characteristics of the  $\text{Cu}_2\text{O-CdS}$  p-n transition. Periodic illumination of the photo-  
sensitive layer for a period of 20 min raised their sensitivity by hundreds

DROZDOV, V.A.; VERINA, G.P., tekhnicheskiy redaktor

[Specifications for construction of items in large-scale building]  
Pravila soorusheniia ob"ektov massovogo stroitel'stva. Moskva,  
Gos.transp. shel-dor. izd-vo. Section 4. [Railroad buildings]  
Zheleznodorozhnye zdania. 1954. 25 p. (MLRA 9:3)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo stroitel'stva i proyektirovaniya.  
(Railroads--Construction)

~~PROZDOV~~ DROZDOV, V. A., Cand Tech Sci -- (diss) "Study of the Performance  
of Large-Sized Block Walls." Mos, 1957. 16 pp (Mos Order of Lenin  
and Order of Labor Red Banner Inst of Engineers of Rail<sup>road</sup> Trans-  
portation im I. V. Stalin), 110 copies (KL, 49-57, 113)

- 33 -

DROZDOV, V.A., insh.

Air permeability and strength of vertical joints in large-block  
construction. Transp.stroi. 7 no.5:13-16 My '57. (MIRA 10:11)  
(Concrete blocks--Testing)

KIROV, S.A., kand.tekhn.nauk; LISTOV, A.M., kand.tekhn.nauk; KOPYSHTA, I.L., inzh.; DROZDOV, V.A., kand.tekhn.nauk; TITORENKO, N.Ye., kand.tekhn.nauk; BUTOR, A.I., inzh.; Prinimali uchastiye: ALEKSEYEV, A.P., kand.tekhn.nauk; MALYSHEV, Ye.G., kand.tekhn.nauk; GAGARIN, Yu.A., inzh.; TITOV, S.A., inzh.; TUMARINSON, N.S. inzh.; KRUTIKOV, V.I., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Completely precast buildings with few stories] Polnosbornye maloetazhnye zdania. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshchenia, 1962. 87 p. (Vsesoiuznyi nauchno-issledov. institut transportnogo stroitel'stva. Trudy no.44). (MIRA 15:8)

(Railroads—Buildings and structures)

(Precast concrete construction)



DROZDOV, V.A., kand.tekhn.nauk; ALEKSANDROV, Yu.P., inzh.

Use of caps of organic glass for natural lighting of industrial  
buildings. Prom. stroi. 42 no.7:13-17 '65.

(MIRA 1818)

ACC NR: AT6028812

(N)

SOURCE CODE: UR/3222/65/000/008/0119/0129

AUTHOR: Drozdov, V. B. (Aspirant)

ORG: none

TITLE: Interaction theory of obliquely incident waves with a vertical wall

SOURCE: Moscow. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut morskogo transporta. Trudy, no. 8(14), 1965. Volvonyye issledovaniya; inzhenernyye izyskaniya (Wave studies; engineering research), 119-129

TOPIC TAGS: ocean <sup>tide</sup> ~~wave~~, ocean dynamics, spectrum analysis, approximation method

ABSTRACT: The interaction between three-dimensional sea waves and a vertical wall is studied; the waves are obliquely incident to the wall. The study is based on a .. method suggested by G. G. Stokes (Mathematical and Physical Papers, vol. 1.) and developed by Yu. M. Krylov (Trudy GOIN, vyp. 21(33). M. Gidrometeoizdat, 1952.) and consists of sequential approximations. Basic equations and their boundary conditions are formulated for three-dimensional waves in ideal, heavy incompressible fluid satisfying the flow conditions of a flat horizontal bottom and a vertical wall. First and second approximations are made by considering terms of first and second order of smallness. The first approximation leads to the formulas for infinitely small amplitude waves and the second to an approximate solution of the problem.

Interaction of finite amplitude horizontal waves with a vertical wall causes formation

Card 1/2

ACC NR: AT6028812

of interference waves that propagate parallel to the wall at constant velocity. Measured load values on the wall for waves with direct frontal incidence did not differ by more than 20% from those calculated; measured load values for waves at oblique incidence varied more than 20% from the calculated which was attributed to a limited measuring accuracy and inadequate experimental set-up. Orig. art. has: 37 formulas, 1 table, and 2 figures.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 003/

Card 2/2

DROZDOV-TIKHOMIROV L.N.

Quantitative analysis of multicomponent mixtures of steroid hormones by infrared spectroscopy with the aid of computer techniques. Opt. i spektr. 17 no.5:683-693 N '64.

(MIRA 17:12)

*DROZDOV, V.*  
ZHENKOVICH, V., prof. doktor geogr. nauk; LAGUNOVA, I.; PETROVSKIY, Yu.  
zhurnalist; VERD'YAN, Zhan; PETROV, S., inzh.; NAUMOV, S., nauchnyy  
sotrudnik; IOFFE, V., inzh.; DROZDOV, V., inzh.

People of new specialties. Znan. sila 32 no.11:32-34 N '57.

(MLRA 10:11)

1. Direktor Instituta rentgenologii i radiologii Ministerstva zdorovo-  
okhraneniya (for Lagunova)

(Science)

STALIVONENKO, I.; DROZDOV, V.

More concern for service industries. Sov.profsoliuzy 7 no.20:  
47-48 0 '59. (MIRA 12:12)

1. Zaveduyushchiy shilishchno-bytovym otделom Belsovprofa  
(for Stalivonenko). 2. Instruktor shilishchno-bytovogo  
otдела Belsovprofa (for Drozdov).  
(White Russia--Service industries)

DROZDOV, V.

Criticism of modern bourgeois theories of foreign exchange rates.  
Den. i kred. 19 no.8:80-89 Ag '61. (MIRA 14:9)  
(Foreign exchange)

DROZDOV, V.

The International Monetary Fund: illusions and reality. Den. 1 kred.  
20 no.7:70-77 J1 '62. (MIRA 15:7)  
(International Monetary Fund)

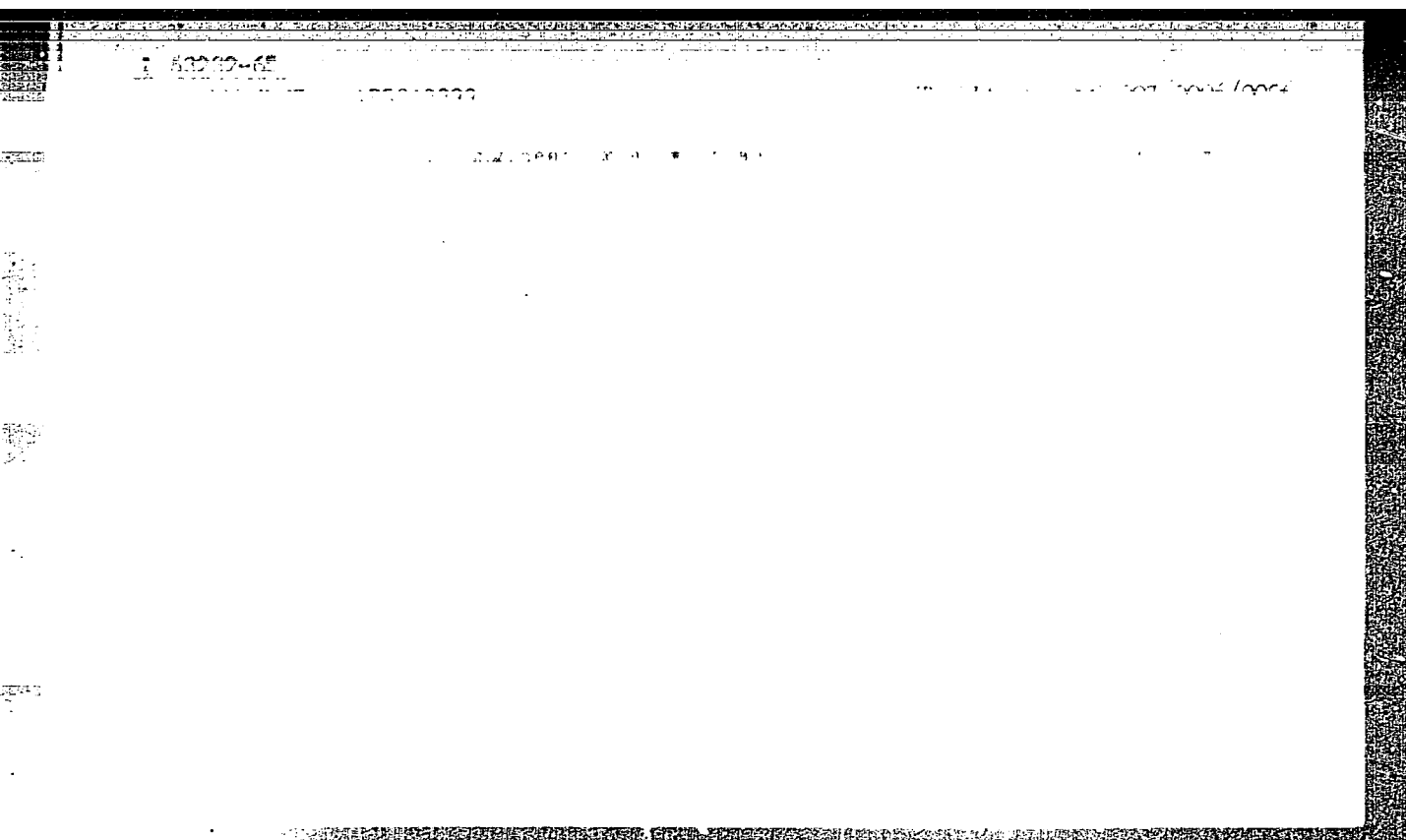


DROZDOV, V.

Foreign exchange and financial problems of modern capitalism.  
Vnesh. torg. 43 no.10:50-52 '63. (MIRA 16:11)

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177018870

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CIA-RDP86-00513R000411230

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